WHAT IS CLAIMED IS:

1. A method for heating one or more substrates, comprising:

applying electromagnetic energy to an antenna to generate an electromagnetic field therefrom; and

heating said substrate(s) via said electromagnetic field.

2. The method of claim 1, further comprising:

heating an energy absorbing species with a non-zero electrical conductivity via said electromagnetic field prior to delivering heat energy to said substrate(s), said absorbing species delivering said heat energy to said substrate(s).

3. The method of claim 2, wherein said energy absorbing species is diamagnetic, paramagnetic or ferromagnetic.

4. The method of claim 2, wherein said energy absorbing species is an ionomer, a conducting polymer, an alkali metal, a transition metal, a lanthanide, or a metalloid or a combination thereof.

5. The method of claim 2, wherein said energy absorbing species is colloidal or non-colloidal gold, silicon, cadmium selenide, cadmium sulfide, ruthenium, indium phosphide, indium arsenide, gallium arsenide, gold maleimide, gallium phosphide, hydroxysuccinimidyl gold, nickel-copper, nickel-palladium, palladium-cobalt, nickel-silicon, stainless steel, iron oxide, ferrite, titanium, Phynox, palladium/cobalt alloys, nitinol, titanium, titanium alloys, zirconium, gadolinium, aluminum oxide, dysprosium, cobalt alloys, nickel, gold, palladium, tungsten, or alloys of materials from this group.

6. The method of claim 2, wherein said energy absorbing species is a metal nano- or micro-particle, a semiconducting nano- or micro-particle, a magnetic

nano- or micro-particle, a polystyrene encapsulated metal particle, a buckminsterfullerene, or a liposome-encapsulated metal particle.

7. The method of claim 1, wherein at least one of said substrates is a tissue, a cell, a biomolecule, a biologically active molecule, an adhesive, or a combination thereof.

8. The method of claim 7, wherein said biomolecule or said biologically active molecule is a protein, a lipid, a nucleic acid, or a carbohydrate.

9. The method of claim 7, wherein the biomolecule or biologically active molecule is a pharmaceutical, a biologic, a biomaterial, a diagnostic, or a biological marker.

10. The method is claim 1, wherein the electromagnetic energy is radiofrequency energy.

11. The method of claim 10, wherein said radiofrequency energy has a frequency of about 20 KHz to about 40 GHz.

12. The method of claim 1, wherein the electromagnetic energy generates a magnetic field.

13. The method of claim 1, wherein said antenna comprises at least one coil of electrical conductor.

14. The method of claim 13, wherein said electrical conductor is a solid wire or hollow tubing.

15. The method of claim 1, wherein said antenna is a single coil antenna, a double coil antenna or a solenoid antenna.

16. The method of claim 1, wherein heating said substrates(s) cleaves a bond in at least one of said substrate(s), denatures at least one of said substrate(s) or shrinks at least one of said substrate(s).

17. A method of inducing an alteration in a substrate, comprising:

delivering energy to an energy absorbing species;

heating said energy absorbing species via said energy; and

transferring heat energy from said energy absorbing species to heat said substrate thereby inducing the alteration therein.

18. The method of claim 17, wherein said energy absorbing species is a susceptor.

19. The method of claim 17, wherein said energy absorbing species comprises matter with non-zero electrical conductivity.

20. The method of claim 17, wherein said energy absorbing species is diamagnetic, paramagnetic, or ferromagnetic.

21. The method of claim 17, wherein said energy absorbing species is an ionomer, a conducting polymer, an alkali metal, a transition metal, a lanthanide, or a metalloid or a combination thereof.

22. The method of claim 21, wherein said energy absorbing species is colloidal or non-colloidal gold, silicon, cadmium selenide, cadmium sulfide, ruthenium, indium phosphide, indium arsenide, gallium arsenide, gold maleimide, gallium phosphide, hydroxysuccinimidyl gold, nickel-copper, nickel-palladium, palladium-cobalt, nickel-silicon, stainless steel, iron oxide, ferrite, titanium, Phynox, palladium/cobalt alloys, nitinol, titanium, titanium alloys, zirconium, gadolinium,

aluminum oxide, dysprosium, cobalt alloys, nickel, gold, palladium, tungsten, or alloys of materials from this group.

23. The method of claim 17, wherein said energy absorbing species is a metal nano- or micro-particle, a semiconducting nano- or micro-particle, a magnetic nano- or micro-particle, a polystyrene encapsulated metal particle, a buckminsterfullerene, or a liposome-encapsulated metal particle.

24. The method of claim 17, wherein said energy is radiofrequency energy.

25. The method of claim 24, wherein said radiofrequency energy has a frequency of about 20 KHz to about 40 GHz.

26. The method of claim 17, wherein the energy generates an electromagnetic field.

27. The method of claim 26, wherein said electromagnetic field is generated via an antenna.

28. The method of claim 27, wherein said antenna comprises at least one coil of electrical conductor.

29. The method of claim 28, wherein said electrical conductor is a solid wire or hollow tubing.

30. The method of claim 28, wherein said antenna is a single coil antenna, a double coil antenna or a solenoid antenna.

31. The method of claim 17, wherein the substrate is a biomolecule, a biologically active molecule, a tissue, or a cell.

32. The method of claim 31, wherein said biomolecule or biologically active molecule is a protein, a lipid, a nucleic acid, or a carbohydrate.

33. The method of claim 31, wherein said biomolecule or biologically active molecule is a pharmaceutical, a biologic, a biomaterial, a diagnostic, or a biological marker.

34. The method of claim 17, wherein said substrate is inorganic.

35. The method of claim 34, wherein said substrate is a shape memory alloy.

36. The method of claim 17, wherein the alteration induced in said substrate is a cleaved bond, is denaturation of said substrate or is contraction of said substrate.

37. A device for the treatment of substrates, comprising:

a radiofrequency power supply;

an energy absorbing species; and

a means for inductively applying said radiofrequency energy to said substrates.

38. The device of claim 37, wherein the substrates are biologicals, biologically active materials, tissues, or cells.

39. The device of claim 37, wherein said substrates are *in vitro*.

40. The device of claim 37, wherein the power supply generates radiofrequency energy from about 20 KHz to about 40 GHz.

41. The device of claim 37, wherein said means of inductively applying energy comprises an antenna.

42. The device of claim 41, wherein said antenna comprises at least one coil of electrical conductor.

43. The device of claim 42, wherein said electrical conductor is solid wire or hollow tubing.

44. The device of claim 41, wherein said antenna is a single coil antenna, a double coil antenna or a solenoid antenna.

45. The device of claim 37, wherein said energy absorbing species is a susceptor.

46. The device of claim 37, wherein said energy absorbing species comprises matter with non-zero electrical conductivity.

47. The device of claim 37, wherein said energy absorbing species is diamagnetic, paramagnetic, or ferromagnetic.

48. The device of claim 37, wherein said energy absorbing species is an ionomer, a conducting polymer, an alkali metal, a transition metal, a lanthanide, or a metalloid or a combination thereof.

49. The device of claim 48, wherein said energy absorbing species is colloidal or non-colloidal gold, silicon, cadmium selenide, cadmium sulfide, ruthenium, indium phosphide, indium arsenide, gallium arsenide, gold maleimide, gallium phosphide, hydroxysuccinimidyl gold, nickel-copper, nickel-palladium, palladium-cobalt, nickel-silicon, stainless steel, iron oxide, ferrite, titanium, Phynox, palladium/cobalt alloys, nitinol, titanium, titanium alloys, zirconium, gadolinium,

aluminum oxide, dysprosium, cobalt alloys, nickel, gold, palladium, tungsten, or alloys of materials from this group.

50. The device of claim 37, wherein said energy absorbing species is a metal nano- or micro-particle, a semiconducting nano- or micro-particle, a magnetic nano- or micro-particle, a polystyrene encapsulated metal particle, a buckminsterfullerene, or a liposome-encapsulated metal particle.

51. A composition used in the treatment of one or more substrates, comprising:

at least one reactant; and,

at least one energy absorbing species.

52. The composition of claim 51, wherein said reactant(s) is a protein, a lipid, a nucleic acid, or a carbohydrate.

53. The composition of claim 51, wherein said reactant(s) comprises a pharmaceutical, a biologic, a biologically active molecule, a diagnostic, a biological marker or a combination thereof.

54. The composition of claim 51, wherein said energy absorbing species comprises matter with non-zero electrical conductivity.

55. The composition of claim 51, wherein said energy absorbing species is diamagnetic, paramagnetic, or ferromagnetic.

56. The composition of claim 51, wherein said energy absorbing species is an ionomer, a conducting polymer, an alkali metal, a transition metal, a lanthanide, or a metalloid or a combination thereof.

57. The composition of claim 56, wherein said energy absorbing species is colloidal or non-colloidal gold, silicon, cadmium selenide, cadmium sulfide, ruthenium, indium phosphide, indium arsenide, gallium arsenide, gold maleimide, gallium phosphide, hydroxysuccinimidyl gold, nickel-copper, nickel-palladium, palladium-cobalt, nickel-silicon, stainless steel, iron oxide, ferrite, titanium, Phynox, palladium/cobalt alloys, nitinol, titanium, titanium alloys, zirconium, gadolinium, aluminum oxide, dysprosium, cobalt alloys, nickel, gold, palladium, tungsten, or alloys of materials from this group.

58. The composition of claim 51, wherein said energy absorbing species is a metal nano- or micro-particle, a semiconducting nano- or micro-particle, a magnetic nano- or micro-particle, a polystyrene encapsulated metal particle, a buckminsterfullerene, or a liposome-encapsulated metal particle.

59. A method of treatment for one or more substrates in an individual, comprising:

positioning the substrates;

applying the composition of claim 51 to at least one of said substrates;

applying energy to said composition; and

curing said composition thereby treating said substrate(s).

60. The method of claim 49, wherein said substrate(s) is a biomolecule, a biologically active molecule, a tissue. or a cell.

61. The method of claim 59, wherein at least one of said substrates is an implant or a bandage.

62. The method of claim 59, wherein curing said composition seals said substrate(s), fills-in an opening in said substrates, fuses said substrate(s), or fixes said substrate(s).

63. The method of claim 59, wherein curing said composition denatures at least one of said reactants or changes molecular structure of at least one of said reactants.

64. The method of claim 59, wherein said energy is radiofrequency energy, magnetic or an electrical current.

65. The method of claim 64, wherein said radiofrequency energy has a frequency from about 20KHz to about 40GHz.

66. The method of claim 59, wherein said energy is applied via an antenna.

67. The method of claim 66, wherein said antenna comprises at least one coil of electrical conductor.

68. The method of claim 67, wherein said electrical conductor is solid wire or hollow tubing.

69. The method of claim 66, wherein said antenna is a single coil antenna, a double coil antenna or a solenoid antenna.